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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,914	09/29/2003	Kurt Leipold	Harman.7297	7350

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EXAMINER	
LAO, LUN S	

ART UNIT	PAPER NUMBER
2615	

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08/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/673,914	LEIPOLD, KURT	
	Examiner	Art Unit	
	Lun-See Lao	2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 May 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28 and 30-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28 and 30-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Introduction

1. This action is response to the amendment filed on 05-22-2007. Claims 1-20 have been amended and claims 21-28 and 30-34 have been added. Claims 1-28 and 30-34 are pending.

Claim Objections

2. Claims 26-28 are objected to because of the following informalities: claims 26-28 recited " 26.(New), 27. (New), 28. (New)" on line 1, which appears to be --- 27.(New), 28. (New), 29. (New)---. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4, 12-19, 21 and 24-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Otani (JP 07-267003).

Consider claim 1 Otani teaches a sound system for a vehicle comprising at least one door (see fig.1, (1)), said sound system comprising:

a loudspeaker (2) having a resonant volume formed by a first cavity (5a) situated inside of the door; and by a second cavity (5a') situated outside of the door; and means

for pneumatically coupling said first and second cavities to form said resonant volume (5a,5a' and see abstract).

Consider claims 2-3 Otani teaches that the sound system, wherein the means (see fig.1 (1)) for coupling comprises a first opening (5a) in the first cavity (5a) and a second opening (5a') in the second cavity (5a), the first and second openings (5a, 5a') being arranged in close proximity to each other when the door (1) is closed; and at least one of the two openings is provided with a sealing lip, which is compressed when the door is closed and seals off the coupling of the two cavities from the outside (see fig.1 (1 and 6) and see detailed description page 3[0024]-[0026]).

Consider claim 4 Otani teaches that at least one of the two openings (see fig. 1 (5a, 5a')) is provided over the cross-sectional area with an acoustically neutral cover that is permeable to air (see fig.1 (1 and 6) and see detailed description page 3[0024]-[0026]).

Consider claim 12 Otani teaches at least one of the cavities (see fig. 1 (1)) is open to the outside of the resonant volume via diffusion openings (see fig.1 (5a and 5a') and see detailed description page 3[0024]-[0026]).

Consider claims 13-15 Otani teaches the second cavity (see fig.1 (5a') includes a volume defined at least by hollow parts (5a,5a') of the support frame of the vehicle (see abstract); and the support frame includes an A-pillar of the vehicle (see fig.1, (4)) and the support frame includes a B-pillar of the vehicle (the space under said in fig.1, (6)).

Consider claims 16-19 Otain teaches that the support frame includes inherently a sill of the vehicle (see fig.1); and the second cavity (6) includes a volume surrounded by bodywork parts of the vehicle (see fig.1); and the loudspeaker (see fig.1 (2)) is installed

in the bodywork parts (see abstract); and the loudspeaker (see fig.1 (2)) is arranged in the door (1 and see abstract).

Consider claim 21 Otani teaches that a sound system for a vehicle having at least one door (see fig.1), the sound system comprising:

a loudspeaker (2 in fig.1) having a resonant volume formed by a first cavity (5a) situated inside of the door and by a second cavity (5a') situated outside of the door, where the second cavity comprises a volume defined within hollow parts (5a', 5b) of a support frame of the vehicle; and means for pneumatically coupling the first and second cavities (5a,5a') to form the resonant volume (see detailed description page 3[0024]-[0026]).

Consider claim 27 it is essentially similar to claim 21 and is rejected for the reason stated above apropos to claim 21.

Consider claims 24-25 Otani teaches that the means (see fig.5 (40)) for pneumatically coupling comprises tubing; and the second volume is located within an A- pillar of the vehicle (see fig.1 (4) and see detailed description page 3[0024]-[0026]).

Consider claims 26-26 Otani teaches that the second volume (see fig.1 (5a')) is located within an A- pillar (4) and a door sill of the vehicle (see detailed description page 3[0024]-[0026; and the second volume is located within an A- pillar, a door sill and a roof support of the vehicle (see figs 1-4 and see detailed description page 3[0024]-[0026]).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 5-11, 20, 22-23 and 28, 30-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otani (JP 07-267003).

Consider claim 5 Otain teaches that the two cavities (see fig.1 (5a and 5b')) are coupled to one another by a tube connection ((6) and passenger compartment) and abstract); but Otain does not explicitly that a telescopic tube to connect two openings in the cavities.

However, a telescopic tube connection is just one type of well known tube connection (official notice is taken).

Therefore, it would have been obvious that the cavities connection device as taught by Otain could have used a telescopic tube as claimed for flexibly connecting the two opening cavities.

Consider claims 6-7 Otain teaches the tube connection has two tubes (see fig.1 that can be displaced one inside the other and engage in openings of the cavities and at least one of the tubes (6) is connected in an articulated manner to one of the two cavities (5a,5b').

Consider claims 8 and 10 Otain teaches that a partially tube (see fig.1, (6)) is provided for the articulated connection; and the two cavities (see fig. 1 (5a,5b')) are coupled to one another by a hose (6) that connects two openings in the cavities (see fig. 1 (5a,5b') and abstract); but Otain does not explicitly that a flexible tube or a flexible hose to connect two openings in the cavities.

However, a flexible tube or a flexible hose connection is one type of well known tube connection (official notice is taken).

Therefore, it would have been obvious that the cavities connection device as taught by Otain could have used a flexible tube or a flexible hose as claimed for easily connecting the two opening cavities.

Therefore, it would have been obvious that the cavities connection device as taught by Otain could have used a flexible tube or a flexible hose as claimed for easily connecting the two opening cavities.

Consider claim 11 Otain teaches the low-frequency loudspeaker (see fig.1 (2)) is surrounded by a box defining the first or second cavity (see fig.1 (5a,5b') and see dialed description page 3[0024]-[0026]).

Consider claim 20 Otain teaches that the first cavity (see fig 1, (1)) is pneumatically coupled to a cavity situated outside the door by further coupling devices (see abstract); but Otain does not explicitly teach a third cavity situated outside the door.

However Otain does not limit the passenger compartment to be divided in how many cavities.

Therefore, it would have been obvious that the passenger compartment as taught by Otain could have been divided in two cavities such as claimed to enhance the low frequency and security.

Consider claims 22-23 Otani dose not explicitly teach the means for pneumatically coupling comprises a bellows or a telescoping tube connection.

However, a bellows or a telescoping tube connection is one type of well known tube connection (official notice is taken).

Therefore, it would have been obvious that the cavities connection device as taught by Otani could have used a bellows or a telescoping tube connection as claimed for easily connecting the two opening cavities.

Consider claims 9, 28 and 30, they are essentially similar to claims 22-23 and are rejected for the reason stated above apropos to claims 22-23.

Consider claim 31 Otani teaches that the means (see fig.5 (40)) for pneumatically coupling comprises tubing.

Consider claims 32-34 Otani teaches that the second volume is located within an A-pillar of the vehicle (see fig.1 (4) and see detailed description page 3[0024]-[0026]); and the second volume (see fig.1 (6)) is located within an A- pillar (4) and a door sill of the vehicle (see detailed description page 3[0024]-[0026; and the second volume is located within an A- pillar, a door sill and a roof support of the vehicle (see figs 1-4 and see detailed description page 3[0024]-[0026]).

Response to Arguments

7. Applicant's arguments with respect to claims 1-34 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bahm, III (US PAT. 5,606,623) is cited to show other related sound system for a vehicle.

9. Any response to this action should be mailed to:

Mail Stop ____(explanation, e.g., Amendment or After-final, etc.)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Facsimile responses should be faxed to:
(571) 273-8300

Hand-delivered responses should be brought to:
Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lao,Lun-See whose telephone number is (571) 272-7501 The examiner can normally be reached on Monday-Friday from 8:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian, can be reached on (571) 272-7848.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 whose telephone number is (571) 272-2600.

Lao,Lun-See L.S.
Patent Examiner
US Patent and Trademark Office
Knox
571-272-7501
Date 07-24-2007

VIVIAN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600